IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

RIVERBED TECHNOLOGY, INC.,

Plaintiff,

v.

SILVER PEAK SYSTEMS, INC.,

Defendant.

Civil Action No. 11-484-RGA

MEMORANDUM OPINION

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ANDREWS, U.S. DISTRICT JUDGE:

Three post-trial motions are currently before the Court. Silver Peak Systems, Inc. filed a

motion for a permanent injunction pursuant to 35 U.S.C. § 283. (D.I. 287). Riverbed

Technology, Inc. filed a motion to strike the declarations of two witnesses offered by Silver Peak

in support of its permanent injunction motion. (D.I. 299). In addition, Riverbed filed for

renewed judgment as a matter of law. (D.I. 297). The briefing is complete, and the Court

received the benefit of oral argument on August 20, 2014. (D.I. 325). For the reasons outlined

below, Riverbed's JMOL motion and Silver Peak's motion for a permanent injunction are

denied. Riverbed's motion to strike the declarations Silver Peak submitted in support of its

motion is dismissed as moot.

I. BACKGROUND

This case pits two companies in the Wide Area Network ("WAN") optimization market

against each other. Companies in the WAN optimization market utilize hardware and virtual

appliances[1] to minimize the application performance problems caused by bandwidth constraints.

(D.I. 291-7 at 2). There are numerous types of deployments, but the two pertinent ones for this

case are data-center-to-data-center deployments and branch office deployments. Riverbed

entered the market first and focused on the branch office deployments, whereas Silver Peak

directed its efforts towards the data center deployments.

Riverbed filed suit against Silver Peak on June 1, 2011, alleging infringement of four

U.S. patents. (D.I. 1). The Court entered a Scheduling Order bifurcating the case into separate

damages and liability portions, with the discovery into damages yet to commence. (D.I. 21).

Riverbed subsequently amended its complaint on December 19, 2011 to assert infringement of a

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[1] Riverbed's appliances are called "Steelheads."

fifth patent. (D.I. 38). In November 2012, Riverbed dismissed two of the patents. (D.I. 114)

The Court later stayed Riverbed's case involving the three other patents pending a potential

appeal of an *inter partes* re-examination that rejected all of the relevant independent claims for

two of the patents. (D.I. 170). Riverbed has not wanted to proceed alone on the third of the

remaining patents. Riverbed's claims remain stayed. (*Id.*).

On August 17, 2011, Silver Peak counterclaimed and asserted that Riverbed infringed

three patents: U.S. Patent Nos. 7,945,736 ("the '736 patent"), 7,948,921 ("the '921 patent" and

collectively, "the Silver Peak patents"), and 7,630,295.[2] (D.I. 13). The disputed terms in the

Silver Peak patents have been construed. (D.I. 158 & 260).

A series of summary judgment motions followed. The parties filed cross-motions for

summary judgment of infringement and non-infringement of the '736 patent (D.I. 171 & 188),

and Silver Peak filed a separate motion seeking summary judgment of infringement of the '921

patent. (D.I. 184). On January 24, 2014, the Court granted partial summary judgment of

infringement of the '921 patent for RiOS[3] versions 5.0.0 and higher, but reserved for trial a

determination of the corresponding hardware that contains the infringing software. (D.I. 233, p.

12; D.I. 234). The cross-motions for summary judgment on the '736 patent were denied. (D.I.

234).

The Court held a five-day jury trial, commencing on March 24, 2014. (D.I. 274, 275,

276, 277 & 278). At the conclusion of the trial, the jury returned a verdict largely in Silver

Peak's favor. The jury concluded that: 1) Riverbed does not literally infringe claims 1, 2, 8, 9,

10, and 17 of the '736 patent, but Riverbed does infringe those claims under the doctrine of

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[2] Silver Peak dropped the '295 patent allegations during the Pretrial Conference on March 7, 2014. (D.I. 247 at 22:13-18).
[3] "RiOS" is the name of Riverbed's software.

equivalents; 2) Riverbed contributorily infringes claims 1, 2, 8, 9, 10, and 17 of the '736 patent; and 3) Riverbed induced infringement of claim 1 of the '921 patent. (D.I. 271 at 2-3). The jury also found that claim 1 of the '921 patent is not invalid as anticipated. (*Id.* at 4).

The parties then submitted post-trial motions. Riverbed filed a renewed motion for judgment as a matter of law, seeking this Court's determination that Silver Peak failed to adduce sufficient evidence upon which a reasonable jury could conclude that Riverbed indirectly infringed the '736 and '921 patents. (D.I. 297). In addition, Riverbed seeks judgment as a matter of law that it does not infringe the '736 patent under the doctrine of equivalents, and that the '921 patent is invalid as anticipated. (*Id.*). Silver Peak moves the Court for a permanent injunction under § 283. (D.I. 287). Riverbed filed a subsequent motion to strike the declarations of Silver Peak's CEO and Senior Vice President that were submitted by Silver Peak in connection with its motion for a permanent injunction. (D.I. 299). Each of these will be addressed in turn.

II. LEGAL STANDARD

A. Judgment as a Matter of Law

Judgment as a matter of law is appropriate if "the court finds that a reasonable jury would not have a legally sufficient evidentiary basis to find for [a] party" on an issue. FED. R. CIV. P. 50(a)(1). "Entry of judgment as a matter of law is a 'sparingly' invoked remedy, granted only if, viewing the evidence in the light most favorable to the nonmovant and giving it the advantage of every fair and reasonable inference, there is insufficient evidence from which a jury reasonably could find liability." *Marra v. Phila. Hous. Auth.*, 497 F.3d 286, 300 (3d Cir. 2007) (internal citation omitted).

To prevail on a renewed motion for judgment as a matter of law following a jury trial, the moving party "must show that the jury's findings, presumed or express, are not supported by substantial evidence or, if they were, that the legal conclusion(s) implied [by] the jury's verdict cannot in law be supported by those findings." *Pannu v. Iolab Corp.*, 155 F.3d 1344, 1348 (Fed. Cir. 1998) (alteration in original). "'Substantial' evidence is such relevant evidence from the record taken as a whole as might be accepted by a reasonable mind as adequate to support the finding under review." *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 893 (Fed. Cir. 1984).

In assessing the sufficiency of the evidence, the court must give the non-moving party, "as [the] verdict winner, the benefit of all logical inferences that could be drawn from the evidence presented, resolve all conflicts in the evidence in his favor and, in general, view the record in the light most favorable to him." *Williamson v. Consol. Rail Corp.*, 926 F.2d 1344, 1348 (3d Cir. 1991); *Perkin-Elmer Corp.*, 732 F.2d at 893. The court may not determine the credibility of the witnesses nor "substitute its choice for that of the jury between conflicting elements in the evidence." *Perkin-Elmer Corp.*, 732 F.2d at 893. Rather, the court must determine whether the evidence supports the jury's verdict. *See Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1014 (Fed. Cir. 1998); *Gomez v. Allegheny Health Servs. Inc.*, 71 F.3d 1079, 1083 (3d Cir. 1995) (describing standard as "whether there is evidence upon which a reasonable jury could properly have found its verdict"); 9B CHARLES ALAN WRIGHT & ARTHUR R. MILLER, FEDERAL PRACTICE AND PROCEDURE § 2524 (3d ed. 2008) ("The question is not whether there is literally no evidence supporting the party against whom the motion is directed but whether there is evidence upon which the jury might reasonably find a verdict for that party.").

4

Where the moving party bears the burden of proof, the Third Circuit applies a different standard. This standard "'requires the judge to test the body of evidence not for its insufficiency to support a finding, but rather for its overwhelming effect.'" *Fireman's Fund Ins. Co. v. Videfreeze Corp.*, 540 F.2d 1171, 1177 (3d Cir. 1976) (quoting *Mihalchak v. Am. Dredging Co.*, 266 F.2d 875, 877 (3d Cir. 1959)). The Court "'must be able to say not only that there is sufficient evidence to support the finding, even though other evidence could support as well a contrary finding, but additionally that there is insufficient evidence for permitting any different finding.'" *Id.* (quoting *Mihalchak*, 266 F.2d at 877).

B. Permanent Injunction

The Patent Act vests in this Court the power to "grant injunctions in accordance with the principles of equity to prevent the violation of any right secured by patent, on such terms as the court deems reasonable." 35 U.S.C. § 283. In order to succeed on a motion for a permanent injunction, the plaintiff must satisfy the four-factor test articulated in *eBay*:

> A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.

eBay Inc. v. MercExchange, L.L.C., 547 U.S. 388, 391 (2006). An injunction should not be granted lightly, as the Supreme Court has cautioned, because it is a "drastic and extraordinary remedy." *Monsanto Co. v. Geertson Seed Farms*, 561 U.S. 139, 165 (2010). Indeed, if the plaintiff's injury can be adequately redressed with a less severe remedy, "recourse to the additional and extraordinary relief of an injunction" is not warranted. *Id.* at 166.

5

III. DISCUSSION

The parties' post-trial briefing raises four main issues: whether Silver Peak adduced

sufficient evidence on which a reasonable jury could conclude Riverbed indirectly infringed the

'736 and '921 patents; whether the testimony of Silver Peak's expert witness was sufficient to

support the jury's finding of infringement of the '736 patent under the doctrine of equivalents[4];

whether claim 1 of the '921 patent is invalid as anticipated; and whether Silver Peak has satisfied

the requirements for the entry of a permanent injunction. These issues will be addressed in

order.

A. Indirect Infringement of the '736 and '921 Patents

Silver Peak asserted, and the jury found, indirect infringement against Riverbed with

respect to the '736 and '921 patents. More specifically, the jury concluded that Riverbed

contributorily infringed the '736 patent and induced infringement of the '921 patent. Riverbed

challenges these findings on two grounds. First, Riverbed denies that Silver Peak established the

requisite knowledge for indirect infringement. Second, Riverbed contends Silver Peak failed to

present sufficient evidence of customer use of the accused features in the United States.

Infringement must be proven by a preponderance of the evidence. There must first be

direct infringement by another in order for either a contributory or induced infringement claim to

lie. *Joy Techs., Inc. v. Flakt, Inc.*, 6 F.3d 770, 774 (Fed. Cir. 1993). Any instances of direct

infringement must take place within the United States. 35 U.S.C. § 271. In addition to direct

infringement by another, establishing contributory infringement under section 271(c) requires

proof that the defendant sold a material component for use in a patented process, the component

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[4] Riverbed also advanced the disclosure-dedication rule in its briefing as an independent ground for precluding the doctrine of equivalent's application to this case. (D.I. 303, pp. 16-18). Counsel for Riverbed voluntarily waived this argument during oral argument, however, advising the Court that its other positions were more meritorious. (D.I. 325 at 48-49). The Court appreciates counsel's candor.

has no substantial non-infringing uses, and the component is known "to be especially made or especially adapted for use in an infringement of such patent." *i4i Ltd. P'ship v. Microsoft Corp.*, 598 F.3d 831, 850-51 (Fed. Cir. 2010), *aff'd*, 131 S. Ct. 2238 (2011); *see also Aro Mfg. Co. v. Convertible Top Replacement Co.*, 377 U.S. 476, 488 (1964) ("[Section 271(c)] require[s] a showing that [Riverbed] knew that the combination for which [its] component was especially designed was both patented and infringing."). Similarly, making out a case of induced infringement pursuant to section 271(b) requires proof "that once the defendants knew of the patent, they 'actively and *knowingly* aid[ed] and abett[ed] another's direct infringement.'" *DSU Med. Corp. v. JMS Co.*, 471 F.3d 1293, 1305 (Fed. Cir. 2006) (alterations and emphasis in original) ("The 'mere knowledge of possible infringement by others does not amount to inducement; specific intent and action to induce infringement must be proven.'"); *see Global-Tech Appliances, Inc. v. SEB S.A.*, 131 S. Ct. 2060, 2068 (2011) ("[I]nduced infringement under § 271(b) requires knowledge that the induced acts constitute patent infringement.").

1. *Knowledge*

Although it is a very close call, Silver Peak presented the jury with a legally sufficient evidentiary basis to conclude Riverbed had the requisite knowledge for indirect infringement. Riverbed became aware of the '736 and '921 patents no later than August 2011 when Silver Peak counterclaimed and asserted those patents. Indeed, Riverbed's knowledge of both patents as of August 17, 2011 is listed under "Uncontested Facts That Require No Proof" in Exhibit 1 to the Pretrial Order. (D.I. 237-1, pp. 2-3). At the conclusion of the trial, the jury found that Riverbed contributorily infringed the '736 patent and induced infringement of the '921 patent. That Riverbed had the necessary knowledge to support these indirect infringement verdicts is implicit in the jury's determination, although there was no "smoking gun" on which the jury could rely.

7

After hearing live testimony of persons having ordinary skill in the art ("PHOSITAs") examining and explaining countless technical exhibits, the jury concluded Riverbed indirectly infringed Silver Peak's patents. Numerous PHOSITAs are employed by Riverbed, at least some of whom know how Riverbed's products function. Based on its knowledge of the patents, an identification of the accused functionality, the knowledge of the PHOSITAs employed at Riverbed, and a legal filing from Silver Peak claiming Riverbed's products infringe, a reasonable jury could conclude that Riverbed realized that customers using its products would be infringing the Silver Peak patents. Riverbed chose not to design around, remove, or instruct customers not to use the accused features; instead, Riverbed continued to sell its products with the accused features included. This provides sufficient support for the jury's determination that, more likely than not, Riverbed knew its products were patented by the '736 patent and were infringing. *See Aro Mfg. Co.*, 377 U.S. at 488. The same is true with respect to whether Riverbed knew that the acts it induced its customers to undertake when using its products constituted infringement of the '921 patent. *See Fuji Photo Film Co. v. Jazz Photo Corp.*, 394 F.3d 1368, 1377-78 (Fed. Cir. 2005) (recognizing "[a] patentee may prove intent [to induce infringement] through circumstantial evidence," and cautioning that intent "is a factual determination particularly within the province of the trier of fact" (citation omitted)).

2. *Customer Use*

Even though Silver Peak offered no direct evidence of customer use inside the United States, its circumstantial evidence is just barely sufficient to convince the Court not to disturb the jury's verdict. Direct infringement—customer use of the infringing features covered by the '736 and '921 patents—can be demonstrated via circumstantial evidence. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1318 (Fed. Cir. 2009) (holding circumstantial evidence sufficient

to support a jury verdict finding certain features of Microsoft Outlook infringe Lucent's patent).

In *Lucent*, the only proven instances of direct infringement were by the plaintiff's expert witness

and his wife. *Id.* at 1317-18. This was not fatal to the patentee's case because, as the Federal

Circuit explained, other circumstantial evidence supported the jury's verdict:

> If that were the only evidence of performing the claimed method, we would likely
> have to reverse. Nevertheless, circumstantial evidence was just adequate to permit
> a jury to find that at least one other person within the United States during the
> relevant time period, other than the expert, had performed the claimed method.
> Lucent's expert testified that "[i]t's hard to imagine that we're the only two people
> in the world that ever used it." J.A. 07517. As Lucent notes "Microsoft not only
> designed the accused products to practice the claimed invention, but also instructed
> its customers to use the accused products in an infringing way."

Id. at 1318. The Federal Circuit cited one of its previous cases for support, *Moleculon Research*,

which found the plaintiff had "met its burden of showing infringement under section 271(b) with

circumstantial evidence of extensive puzzle sales, dissemination of an instruction sheet teaching

the method of restoring the preselected pattern with each puzzle, and the availability of a solution

booklet on how to solve the puzzle." *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261,

1272 (Fed. Cir. 1986) (affirming district court's finding of infringement based entirely on

circumstantial evidence), *abrogated on other grounds by Egyptian Goddess, Inc. v. Swisa, Inc.*,

543 F.3d 665 (Fed. Cir. 2008) (en banc). In *Lucent*, the jury "reviewed evidence relating to the

extensive sales of Microsoft products and the dissemination of instruction manuals for the

Microsoft products," as well as corresponding testimony from Lucent's expert. *Lucent*, 580 F.3d

at 1318. Relying on the similarities to *Moleculon Research*, the Federal Circuit found the jury

could "have reasonably concluded that, sometime during the relevant period from 2003 to 2006,

more likely than not one person somewhere in the United States had performed the claimed

method using the Microsoft products." *Id.*

The instant case is analogous to *Lucent* and *Moleculon Research* as far as the type of circumstantial evidence Silver Peak proffered. Although smaller than Microsoft, Riverbed is a billion dollar company with extensive sales. (Tr. 156:3-15). Mr. Wu, Riverbed's CTO, testified that the number of Riverbed customers using RiOS software is "[p]robably more than thousands." (*Id.* at 961:1-6).

With respect to the '736 patent, Silver Peak submitted entries from Riverbed's Splash community support forum on its U.S. website which demonstrate use of Riverbed appliances with SDR-Adaptive[5] enabled. SDR-A is the infringing feature covered by the '736 patent, and it is undisputed that Riverbed sells its devices with this feature disabled (SPX 1114, p. 412), meaning that Silver Peak must show customers turn on the feature in order to establish infringement. In one post, dated January 17, 2012, a user explained a problem he encountered where the speed of copying a large file increased with each repetition on a given day, but slowed down to normal levels when performed on a subsequent day. SPX 1246. He notes, "The cifs connections [are] showing as being 84% optimized[,] the data store is 100% used (SDR-Adaptive (advanced)), highlighting a 45% miss rate to hit rate . . . ." *Id.* Another entry, dated March 7, 2013, describes a problem with download speed with and without optimization. SPX 1247. The user explains her current set up as: "CSH is 5050 and the SSh is a 7050 both running RiOS 6.1.4 with SDR adaptive advanced." *Id.* Finally, on November 13, 2013, a user posted a comparison of speeds using "SDR Maximum Compression," "SDR Adaptive," and "SDR Max Throughput." SPX 1249. All three of these posts demonstrate the use of Riverbed appliances using the SDR-A feature. The fact that these entries were posted on Riverbed's U.S. forum in "American English" supports the jury's conclusion that these uses occurred in the United States.

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[5] This feature is sometimes referred to as "SDR-A."

Silver Peak also presented a Riverbed product manual instructing its users on how to use SDR-A. The Riverbed Command-Line Interface Reference Manual for RiOS version 6.0.1 explains the SDR-A functionality and how to activate it. SPX 856, pp. 206-07. Although Riverbed created this manual prior to its knowledge of the '736 patent, it nonetheless provides corroboration for the notion that Riverbed customers knew how to activate SDR-A.

In sum, Silver Peak has offered evidence of Riverbed's high sales volume, an instruction manual describing how to activate SDR-A, and several blog entries on Riverbed's U.S. support forum from people who used their Riverbed devices with SDR-A enabled. Taken together, this circumstantial evidence is sufficient to permit a jury to reasonably conclude "that, sometime during the relevant period [], more likely than not one person somewhere in the United States had performed the claimed method using the [Riverbed] products."

The same is true for the '921 patent. In order for there to be infringement of the '921 patent, both the Enhanced Auto Discovery ("EAD") and Full Transparency ("FT") features must be turned on. EAD is turned on by default for RiOS versions 6.0 and higher (Tr. 961:12-20), but FT is not (SPX 1114, p. 74), so Silver Peak has to show that Riverbed customers enabled FT. To establish customer use of the EAD and FT features, Silver Peak presented a Riverbed Test Plan instructing users to test FT on their Riverbed devices, Riverbed documents describing when FT would be beneficial, and U.S. Splash community forum posts from users discussing their use of FT.

A litany of Riverbed documents suggest that customers were using EAD with FT enabled. First, Riverbed's WAN Optimization Test Plan 8.0, a document created in 2012, instructs customers to test the various WAN visibility modes, including FT, on their Riverbed devices. (SPX 376A77, p. 46 (telling customers to "Change the 'WAN Visibility Mode' to 'Full

Transparency'" in step 4 of the Procedure); Tr. 894:23-902:21). Second, Riverbed's August 2011 Steelhead Management Console User's Guide describes several benefits of FT, including the preservation of client and server IP addresses, port numbers, and VLAN tags. SPX 1123, p. 35. The fact that the Guide recommends port transparency instead of FT, if both are "acceptable solutions," does not alter the fact that the Guide instructs customers on how to use FT. *Id.* at 35-36. In fact, "if you must see your client or server IP addresses across the WAN, full transparency is your only configuration option." *Id.* at 35. Third, Riverbed's August 2011 Deployment Guide informs customers that the "most suitable WAN visibility mode depends primarily upon your existing network configuration," and those customers managing IP address-based or TCP port-based QoS policies for optimized traffic should consider FT and port transparency. SPX 1114, p. 64. Fourth, a December 2012 Riverbed Product Release Notes for RiOS version 7.0.5b describes a bug fix for non-optimized connections when full or port transparency were enabled. SPX 1221, p. 27 (bug number 93793). Finally, a December 2012 Riverbed TWiki document[6] suggests enabling FT in the "Setup" section for addressing a bug where the "Multi inpath WCCP sends inner packet to incorrect mac address." (SPX 1215, p. 12; Tr. 976:19-979:6).

Posts on Riverbed's Splash community forum also support the notion that Riverbed customers are enabling FT. In 2012, one user was implementing "a new CoS" and thought he might need to change the transparency settings to accomplish his goals. SPX 1229. The response instructed the user to choose from three different transparency modes, one of which was FT, and noted that, "[f]or Cos/QoS implementations, full transparency is usually required." *Id.* In another post from 2014, a user encountered connection speed issues caused by his

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[6] Riverbed's CTO testified that TWiki is a content manager system for storing internal technical documents. (Tr. 977:3-8).

firewall. SPX 1242. One of the fixes attempted by the customer was "Moving away from Fixed

target paths to AutoDiscovery using Full Transparency . . . ." *Id.* Silver Peak also produced

several bug reports, dated before Riverbed had knowledge of the '736 and '921 patents,

describing technical problems customers ran into when using FT. (SPX 391A1; SPX 393A1; *see*

also Tr. 967:6-973:2).

When viewed as a whole, Silver Peak offered sufficient circumstantial evidence to permit

a jury to reasonably conclude that Riverbed customers used the infringing functionality in the

United States. Silver Peak provided the jury with evidence of Riverbed's high sales volume,

numerous Riverbed documents describing the benefits of FT, how to use FT, and instructing

customers on how to test FT, as well as blog posts on Riverbed's U.S. support forum from users

who used FT.

B. Infringement Under the Doctrine of Equivalents for the '736 Patent

The testimony of Silver Peak's expert, Dr. Spring, is sufficient to support the jury's

finding of infringement of the '736 patent under the doctrine of equivalents by a preponderance

of the evidence. This dispute turns on whether the "status message" limitation contained in

every asserted claim of the '736 patent is met by the MOD_OPOL and INF_PRESSURE

messages in Riverbed's products. I previously construed "status message" to mean "a message

providing information regarding the relative activity of the faster memory and the slower

memory on a second appliance." (D.I. 260). These messages allow two appliances in a WAN to

determine, based on how busy the appliances are, whether data should be sent literally between

two appliances or whether instructions on where to retrieve the data should be sent. (Tr. 468:19-

470:16). Riverbed contends that the doctrine of equivalents cannot capture its MOD_OPOL and

INF_PRESSURE messages because those messages are only based on the activity of the slower

13

memory[7] and do not provide any information about the activity of the faster memory. (D.I. 303, p. 13).

"The doctrine of equivalents allows the patentee to claim those insubstantial alterations that were not captured in drafting the original patent claim but which could be created through trivial changes." *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 733 (2002). A patentee may prove infringement under the doctrine of equivalents "by showing on a limitation by limitation basis that the accused product performs substantially the same function in substantially the same way with substantially the same result as each claim limitation of the patented product." *Crown Packaging Tech., Inc. v. Rexam Beverage Can Co.*, 559 F.3d 1308, 1312 (Fed. Cir. 2009). In order to satisfy this test, a patentee "must provide particularized testimony and linking argument with respect to the 'function, way, result' test." *Cephalon, Inc. v. Watson Pharms., Inc.*, 707 F.3d 1330, 1340 (Fed. Cir. 2013).

Although by no means encyclopedic, Dr. Spring's testimony addresses all three prongs of the function, way, result test and provides sufficient "linking argument" explaining why he believes the MOD_OPOL and INF_PRESSURE messages of the accused product are substantially the same as the status message in the '736 patent.[8] With respect to the function prong, Dr. Spring offered the following testimony:

> Q. Could you please explain your opinion that the MOD OPOL and INF PRESSURE status messages perform substantially the same function as the status message limitation in the '736 patent?

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[7] In Riverbed's devices, RAM is the faster memory and a hard disk is the slower memory. (D.I. 303, p. 13).
[8] The doctrine of equivalents came up for the first time during re-direct examination of Dr. Spring due to scheduling complications created by the trial spanning over a two week period. As a result, Dr. Spring had already described his position on why the Riverbed products literally infringed the '736 patent's status message limitation. This earlier testimony provided a detailed explanation of the Silver Peak and Riverbed products, and his doctrine of equivalents testimony built on that foundation. The previous testimony included his explanation of how a status message is sent from the second appliance to the first appliance (Tr. 468:19-470:16), and how information about the faster and slower memory is conveyed by the messages in the Riverbed products. (*Id.* at 523:5-526:20).

A. Well, the function of both messages is to convey information to the first appliance about the activity level of the machine sufficient to help it determine whether to send references or data.

Q. And I'm sorry if I didn't hear you. That's the function. What about –

A. That's the function of [] the status message.

Q. – in the patent?

A. So the function in the patent is to send this information back to the first appliance. And the function in Riverbed products is to send this information, activity level information back.

(Tr. 626:20-627:15). Dr. Spring also concluded that the accused messages in the Riverbed products operated in substantially the same way as the status message in the '736 patent:

Q. And could you please explain your opinion [] as to why the MOD OPOL and INF PRESSURE status messages operate in substantially the same way as the '736 patent?

A. Well, the way is, of course, a message is generated and sent back to the first appliance to inform it of the activity.

Q. And it's your opinion that that's the same in both?

A. And that's the same in both.

Q. How's that?

A. Well, the status message that is described here in the claim is to allow the first appliance to make a determination as to whether it was sent literally or sent a reference. And the function of the message as performed by Riverbed is to just be sent back or to the first appliance for the same.

(*Id.* at 627:16-628:9). Finally, Dr. Spring explained that the MOD_OPOL and INF_PRESSURE messages achieved substantially the same result as the status message in the '736 patent because "in both cases, the result is that the first appliance won't send using references. It will make a determination to send." (*Id.* at 628:10-16).

Riverbed, of course, provided its own expert witness, Dr. Kubiatowicz, who provided contradictory testimony. The jury was fully entitled to pick and choose between these two experts' testimony when reaching its verdict. As is frequently the case when two exceedingly qualified experts offer conflicting opinions on highly complex topics, a lay juror's determination of whom to believe can come down to credibility. This is not impermissible. The Court's role at this stage is simply to ensure that the jury had a proper basis on which it could have reached the

15

conclusion it did. Because Silver Peak provided an adequate evidentiary record on which a jury

could conclude the doctrine of equivalents was satisfied, I deny Riverbed's JMOL request.

Riverbed also argues that Dr. Spring's doctrine of equivalents position would

inappropriately vitiate an entire claim limitation because it is his opinion "that a message

containing *any* information was equivalent to the claimed message." (D.I. 303, p. 18 (citing Tr.

638:7-638:13)). This is not persuasive because Dr. Spring's position is that the status message

conveys information about the activity level of the faster and slower memory. (Tr. 620:14-

622:6). The snippet of Dr. Spring's testimony Riverbed quoted in its brief came on re-cross

examination, and Dr. Spring later clarified that the message must contain sufficient information

to be capable of altering the behavior of the first appliance (*id.* at 639:1-5), and to convey an

activity level of the disk. (*Id.* at 639:9-16). As such, it does not remove an entire limitation from

the claim.

C. Invalidity of the '921 Patent

Riverbed has not proven invalidity of the '921 patent by clear and convincing evidence.

Riverbed asserts that the '921 patent is invalid under 35 U.S.C. § 102(b) and (e) because

Riverbed disclosed the invention of the '921 patent to the public prior to Silver Peak by offering

RiOS version 2.0.0 for sale and by publishing a patent application that led to the 7,318,100 ("the

'100 patent"). (D.I. 303, p. 19). Silver Peak does not dispute that these two references predate

the '921 patent.

Pursuant to 35 U.S.C. § 102(b), a person is not entitled to a patent if the invention was "in

public use or on sale in this country[] more than one year prior to the date of application for

patent in the United States."[9] Similarly, a person is not entitled to a patent under § 102(e) if the

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[9] The '921 patent was filed before the AIA's provision took effect.

16

invention was described in "an application for a patent, published under section 122(b), by

another filed in the United States before the invention by the applicant for patent."

The '921 patent is directed towards automatic network optimization. Claim 1 of the '921

patent includes limitations that require "generating an enhanced payload of a second data packet

addressed to the endpoint device based on the indication [and] sending the second data packet

including the enhanced payload to the endpoint device." '921 patent, claim 1. These data

packets[10] include a "header," which contains the source IP address—the address of the machine

that sent the packet—and the destination IP address—the address of the machine receiving the

packet. *See id.*, figs.6 & 8.

Silver Peak argues claim 1's "addressed to the endpoint device" language requires that

the destination IP address field remain the same throughout the transmission[11] from one endpoint

device to another. (Tr. 561:12-564:10). The prior art references cited by Riverbed, the argument

goes, do not invalidate the '921 patent because the first optimization device in those systems

modifies the header to remove the address of the endpoint and replaces it with the address of the

second optimization device before sending the packet to the second optimization device and

ultimately to the endpoint device. (*See, e.g.*, SPX 1114, p. 64 (showing destination IP address in

packet header being altered by first optimization device and sent to second optimization device,

which then restores the original destination IP address and sends packet along to the endpoint);

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[10] As Dr. Spring explained: "[A] packet is this unit of communication. It has a header and it has a payload. You could think of the header like a, where the packet is an envelope where the header is the outside and the payload is the contents of the sender. When you send any data across the network, you split it up into little packets. They're about a thousand bites long, so you might have to send hundreds or thousands of them to get your document across. But they are reassembled at the far side, put back into order, and then you get your transferred document." (Tr. 462:10-21).

[11] A sample transmission might involve the packet being sent from the client to a first optimization device local to the client, then to a second optimization device local to the endpoint device, and finally to the endpoint device itself.

17

Tr. 840:21-844:1). Therefore, Silver Peak claims, the Riverbed references do not practice every limitation of claim 1.

Riverbed argues that the requirement of an unchanging destination IP address field is not in the claim language or the specification, and, in any event, Dr. Kubiatowicz testified that RiOS version 2.0.0 and the '100 patent satisfy the "addressed to the endpoint device" limitation because they send packets via addresses that are unique to the particular endpoint device. (Tr. 843:9-16). The jury was not persuaded by this argument and declined to find the '921 patent anticipated by either prior art reference. There was a sufficient basis for the jury to reach this conclusion, namely that the Riverbed prior art did not disclose the "addressed to the endpoint device" limitation because its products modified the destination IP address field in the packet header. Therefore, I will not reverse the jury's verdict.

D. Permanent Injunction

Silver Peak has failed to make out a case for a permanent injunction because it did not establish the irreparable harm prong of the *Ebay* test. In order to ensure a complete record, however, I will evaluate each of the four factors in turn.

There is no presumption of irreparable harm under the first factor based solely on a finding of patent infringement. *See Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1148-49 (Fed. Cir. 2011). A patentee must establish both that: 1) "absent an injunction, it will suffer irreparable harm," and 2) "a sufficiently strong causal nexus relates the alleged harm to the alleged infringement." *Apple Inc. v. Samsung Elecs. Co.*, 735 F.3d 1352, 1359-60 (Fed. Cir. 2013) ("Sales lost to an infringing product cannot irreparably harm a patentee if consumers buy that product for reasons other than the patented feature." (citation omitted)). The patentee need not prove that one of the patented features is the sole reason consumers purchase the infringing

product, but there must be some demonstrable connection between the patented features and

consumer demand for the infringing products. *Id.* at 1364 (listing examples of how this showing

might be made). The first *Apple* requirement is met in this case, but Silver Peak falls short on

the second one.

To support its case for irreparable harm, Silver Peak offers evidence of lost sales to a

direct competitor, the difficulty in ascertaining the total volume of lost sales, diminished

reputation as an innovator, and constrained company growth. (D.I. 288, pp. 12-15). Silver Peak

tracked the number of head-to-head competitions it has with each competitor in the market

place.[12] Riverbed accounted for 74% of the more than 400 such competitions. (*Id.*, p. 7).

Riverbed also tracked these statistics, and it reported a 61% win rate against Silver Peak in the

eighteen documented competitions for the first quarter of 2011. SPX 69, p. 01162679. For

comparison purposes, Riverbed's win percentage against every other listed competitor exceeded

90%. *Id.* This is direct evidence of lost sales, but not during the relevant time period because

these statistics pre-date Riverbed's knowledge of the Silver Peak patents. Nonetheless, it is

strong circumstantial evidence of lost sales after Riverbed became aware of the patents because

the two companies are still direct competitors, even though there is no evidence showing that the

accused features caused Silver Peak to lose those sales to Riverbed.[13] Silver Peak also offered

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[12] Silver Peak relies on *Robert Bosch LLC* to rebut the notion that additional competitors in the market, by itself, weighs against a finding of irreparable harm. *Robert Bosch LLC*, 659 F.3d at 1151. Were that the case, "we would effectively establish a presumption against irreparable harm whenever the market contains a plurality of players." *Id.* The Court agrees. As discussed below, the deficiency in Silver Peak's irreparable harm showing is not the presence of multiple competitors; Silver Peak has shown that it competes with, and has lost sales to, Riverbed. (D.I. 288, p. 7; SPX 69, p. 01162679). Rather it is the lack of a "strong causal nexus" relating the alleged harm to the infringement. *Apple Inc.*, 735 F.3d at 1359-60. *Robert Bosch LLC* is also distinguishable because the "questionable financial condition" of the defendant rendered a remedy at law inadequate. *Robert Bosch LLC*, 659 F.3d at 1155. There is no similar concern with respect to Riverbed's finances.

[13] Silver Peak contends the full scope of lost sales is difficult to ascertain for two main reasons. First, customers in the WAN optimization market have a tendency to buy a certain number of appliances initially and then purchase additional appliances from the same vendor as the customer's traffic grows. (D.I. 288, p. 9). Therefore, an initial lost sale for only a few appliances could actually represent a much more substantial loss as the customer expands. Second, a significant portion of revenues for vendors in the WAN optimization market are generated through

copies of the Gartner Report[14] to support the notion that Riverbed's infringement diminishes

Silver Peak's reputation as an innovator. The 2009 Gartner Report praised Silver Peak for its

"strong focus on storage replication, backed up by segment-leading products." (D.I. 291-3 at 6).

The same report cited Riverbed's weak quality of service capabilities and its lack of a suitable

device for storage applications as "Cautions." (*Id.* at 5-6). By professing to be a one-for-one

swap for Silver Peak and offering products embodying Silver Peak's patented technology, Silver

Peak claims Riverbed tarnished its reputation for producing segment-leading products. (D.I.

288, pp. 14-15). Finally, Silver Peak alleges its growth as a company is stunted by Riverbed's

infringement in a way that cannot be cured with money damages. (*Id.*, p. 15). Silver Peak is a

smaller company of about 150 employees operated with private funding that depends for growth

on a continual expansion of its product offerings through R&D and increased sales/support

efforts. (*Id.*; Tr. at 132:11-19). These endeavors require funding, and Silver Peak claims

Riverbed's infringement deprives it of the immediate revenue stream necessary to grow the

company. When considered as a whole, the totality of the harm suffered by Silver Peak at the

hands of its direct competitor suggests "that absent an injunction, it will suffer irreparable harm."

Apple Inc., 735 F.3d at 1359.

What Silver Peak did not offer is sufficient evidence linking the patented features to

consumer demand. *Id.* at 1359-60. The Federal Circuit provided a non-exhaustive list of ways

in which this connection could be proven, "for example, with evidence that a patented feature is

one of several features that cause consumers to make their purchasing decisions. It might also be

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maintenance and support contracts with customers. (*Id.*). These contracts call for varying levels of support and
costs, and the level is usually not determined until after the customer settles on a vendor. (*Id.*).

[14] The Gartner Report is produced by an analyst group that publishes quarterly reports tracking the sales, features,
market share, and customer reactions for various companies in the WAN optimization controller market. (Tr.
656:17-657:3).

shown with evidence that the inclusion of a patented feature makes a product significantly more desirable. Conversely, it might be shown with evidence that the absence of a patented feature would make a product significantly less desirable." *Id.* at 1364, 1368 ("Moreover, we see no reason why, as a general matter of economics, evidence that a patented feature significantly increases the price of a product cannot be used to show that the feature drives demand for the product."). This type of evidence is lacking in the record.

The closest Silver Peak comes to connecting consumer demand with the patented features is to offer Riverbed documents claiming its products have all the functionality of Silver Peak's products. (D.I. 288, pp. 7-8). For example, Silver Peak cites: an email alluding to the creation of a training video for the SDR-A feature where one of Riverbed's goals is to be able to "say, 'all features on,' like Silver[P]eak" (D.I. 290-1 at 140); a Riverbed document that it prepared for distribution to customers touting the advantages of the autodiscovery optimization capabilities covered by claim 1 of the '921 patent (*id.* at 142); and a different page in the same Riverbed document highlighting the benefits of its visibility modes. (*Id.* at 146). Silver Peak also makes much of Riverbed's statements that it wants to be a "1-for-1 swap" for competitors, such as Silver Peak, but with more to offer in terms of its size and support capabilities. (D.I. 290-5 at 3; D.I. 308, p. 8). Without infringing Silver Peak's patents, it claims, Riverbed would not be able to make these sales pitches. *See Douglas Dynamics, LLC v. Buyers Prods. Co.*, 717 F.3d 1336, 1344 (Fed. Cir. 2013) ("Irreparable injury encompasses different types of losses that are often difficult to quantify, including lost sales and erosion in reputation and brand distinction.").

Federal Circuit law is clear, however, that evidence of copying or mimicking is not sufficient to establish the required nexus. *See Apple Inc.*, 735 F.3d at 1367 ("[A]lthough evidence that [the defendant's] employees believed it to be important to incorporate the patented

21

feature into [the defendant's] products is certainly relevant to the issue of nexus between the patent and market harm, it is not dispositive." (internal quotation marks omitted)). All of these advertisements may be promoting infringing features copied or derived from Silver Peak, but they do nothing to prove that customer demand is driven by the patented functionality of the '736 and '921 patents as opposed to Riverbed's global support structure, greater company stability, existing customer base, etc. Indeed, Riverbed's CEO attributes his company's success in winning customers to these latter elements. (Tr. 665:5-15).

Presumably Riverbed would not have adopted these features if there were no consumer demand for them. However, this Court cannot grant such a "drastic and extraordinary remedy," *Monsanto Co.*, 561 U.S. at 165, on presumptions alone. This is particularly true when other plausible explanations exist for why a customer would purchase Riverbed's products instead of Silver Peak's. The nexus here is simply too tenuous. I believe the Federal Circuit case law requires a more concrete link between the infringing feature and consumer demand than what Silver Peak has shown.

Under the second factor, legal remedies likely are not adequate to compensate Silver Peak for the infringement of its patent.[15] Silver Peak and Riverbed are direct competitors, and Silver Peak "has a right, granted by Congress, not to assist its rival with the use of [its] proprietary technology." *Novozymes A/S v. Genencor Int'l, Inc.*, 474 F. Supp. 2d 592, 613 (D. Del. 2007). This right has been violated. In addition, Silver Peak claims its reputation as an innovator has been diminished because Riverbed's infringement allows it to offer customers identical features. *See Douglas Dynamics, LLC*, 717 F.3d at 1345 (finding "remedies at law

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[15] Silver Peak analyzed the irreparable injury and lack of an adequate remedy at law factors together because of their "significant overlap." (D.I. 288, p. 12 n.3). Therefore, several of the arguments addressed above, including head to head competition, reputational damage, and constrained company growth, apply to this factor as well.

22

inadequate to compensate [patentee] for at least the reputation loss" caused by defendant's infringement). Moreover, Silver Peak has never licensed the '736 and '921 patents, which suggests monetary damages would not be adequate if its goal is to maintain market exclusivity. (D.I. 308, p. 10).

The third prong, balancing the hardships between Silver Peak and Riverbed, weighs heavily in favor of an equitable remedy. This analysis requires the Court to assess "the relative effect of granting or denying an injunction on the parties" by considering factors such as "the parties' sizes, products, and revenue sources." *i4i Ltd. P'ship*, 598 F.3d at 862-63. Silver Peak would suffer absent an injunction. The two companies are direct competitors, yet Silver Peak is much smaller in size with fewer resources than Riverbed. Moreover, Silver Peak will continue to suffer harm in the market place, including constrained growth and reputational damage. On the other hand, Riverbed issued a press release after the jury verdict describing the patented features involved in this case as "minor" and "optional." (D.I. 290-5 at 6-7). The imposition of an injunction, therefore, would likely result in a similarly "minor" hardship to Riverbed.

Finally, the public interest would be best served by granting an injunction. This case does not implicate any public health or safety concerns, which is the primary reason for finding against an injunction under this prong. *See, e.g., Bard Peripheral Vascular, Inc. v. W.L. Gore & Assocs., Inc.*, 670 F.3d 1171, 1175, 1192 (Fed. Cir.) (denying permanent injunction for patent covering prosthetic vascular grafts used to bypass or replace blood vessels because "it was in the public interest to allow competition in the medical device arena"), *vacated on other grounds*, 476 F. App'x 747 (Fed. Cir. 2012) (granting rehearing en banc "for the limited purpose of authorizing the panel to revise the portion of its opinion addressing willfulness"). Instead, the

23

only relevant public interest is the enforcement of valid and infringed patents. *See Abbott Labs. v. Andrx Pharms., Inc.*, 452 F.3d 1331, 1348 (Fed. Cir. 2006).

After balancing the factors articulated in *eBay*, I find that a permanent injunction against Riverbed should not be granted because the final three factors do not outweigh the absence of irreparable harm. Silver Peak's request for a permanent injunction is denied.[16] The Court notes, however, that Silver Peak's lack of evidentiary support for the irreparable harm prong might very well be attributable to the bifurcated nature of this case. No damages discovery has taken place, which makes it difficult to establish lost sales, lost market share, and a strong nexus between the patented features and customer demand. If further discovery uncovers sufficient evidence to support a permanent injunction, Silver Peak may renew its motion.

IV. CONCLUSION

For the reasons stated above, Riverbed's JMOL motion and Silver Peak's motion for a permanent injunction are denied. Riverbed's motion to strike the declarations Silver Peak submitted in support of its motion is dismissed as moot. An appropriate Order will follow.

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[16] Because I have denied Silver Peak's motion for a permanent injunction, I dismiss as moot Riverbed's motion to strike two of Silver Peak's declarations in support of its injunction motion.